

REMARKS

Claims 1-15 and 40 are pending.

Personal Interview

A personal interview was conducted between Examiner Thao X. Le and the Undersigned Attorney on April 13, 2004. During the personal interview, the Undersigned Attorney presented newly amended claims 1, 9 and 40. Numerous diagrams supporting the claim language were also shown to the Examiner. Upon verifying that the claimed feature is neither disclosed nor taught in the Applicant Admitted prior art and Yoo, the Examiner indicated that the amended claims overcome the asserted prior art rejection.

Claim Rejections - 35 U.S.C. §103

Claims 1-5, 7-12, 14-15 and 40 are rejected under 35 USC §103(a) as being unpatentable over Applicant Admitted Prior Art (APA) in view of US 6,544,845 to Yoo *et al.*

Independent claims 1, 9 and 40 are newly amended to recite the feature that “the gate insulating film is interposed between said substrate and the gate electrode to have a substantially uniform thickness at the region under the gate electrode”.

These features are shown by way of an example in Figures 9A-10B, wherein there are indeed shown that the gate insulating film 12B is interposed between said substrate 11 and the gate electrode 16B so as to have a substantially uniform thickness at the region under the gate electrode 16B.

In this regard, the outstanding Office action has asserted that in the Applicant Admitted prior art as shown in Figure 1Q, the gate insulating film 12B of the semiconductor device is uniform. This finding is erroneous. The gate insulating film 12B actually contains bird's beaks as clearly shown in Figure 2B.

Referring to Figures 11(a)-12(b) of Yoo, the memory cell part and the peripheral transistor part are oxidized simultaneously after the formation of the gate electrodes. According to Yoo, the gate insulating film of the peripheral transistor part is prevented from being made uniform in thickness, and therefore, a transistor having a uniform operating characteristic cannot be obtained. According to the description of Yoo, regarding Figure 11(b), the part indicated by R2 of the thin oxide film 515 is rounded. Generally, when an oxidation of 10 nm is performed according to the process of Figure 11 of Yoo, a bird's beak is formed over 0.1 micrometer from each end of a gate structure.

Therefore, independent claims 1, 9 and 40, as newly amended, are not rendered obvious by the asserted prior art. All claims depending thereon are also not rendered obvious by the asserted prior art.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claim Rejections - 35 U.S.C. §103

Claims 6 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant Admitted Prior Art (APA) and US 6,544,845 to Yoo, *et al.* as applied to claim 1, and further in view of US 6,406,959 to Prall *et al.*

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As mentioned hereinabove, independent claims 1 and 9 are further amended to overcome the combination rejection. Claims 6 and 13, by virtue of inherency, also overcome the combination rejection. Reconsideration and withdrawal of this rejection are respectfully requested.

CONCLUSION

In view of the aforementioned amendments and accompanying remarks, all pending claims are believed to be in condition for allowance, which action, at an early date, is requested.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 50-2866.

Respectfully submitted,

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